

Appl. No. : 10/648,848  
Filed : August 21, 2003

### **REMARKS**

Claims 24, 25 and 27-43 are currently pending. Claims 1-23 and 26 have been canceled. Claims 24 and 25 have been amended. Support for the amendments to claims 24 and 25 can be found at the first paragraph of page 7; the paragraph spanning pages 8 and 9; the second through fourth full paragraphs of page 25; the first full paragraph of page 32; the second full paragraph of page 40; throughout pages 43 to 46 and elsewhere throughout the specification. As such, no new matter has been introduced by way of these claim amendments.

In addition to the foregoing amendments, new claims 27-43 have been added. Support for these claims can be found in the claims as originally filed, at the first paragraph of page 7; the paragraph spanning pages 8 and 9, throughout page 18; the first full paragraph of page 19, the third paragraph of page 31; the last paragraph of page 35; the second paragraph of page 36; the first paragraph of page 45 and elsewhere throughout the specification. Accordingly, the newly added claims present no new matter.

After carefully considering the instant Office Action, Applicants respectfully traverse the Examiner's rejection of claims 24 and 25.

#### **Objection to claims 24 and 25**

The Examiner objects to claims 24 and 25. With respect to claim 24, the Examiner states that step (b)(ii) contains a grammatical error. In particular, the Examiner states that the phrase "a least one decoding nucleotide" should be amended to recite "at least one decoding nucleotide." The Examiner also states that the conjunction "and" should be placed between steps (d)(i) and (d)(ii) of claim 25.

Applicants have followed the Examiner's recommendation and have replaced "a" with "at" in claim 24. Additionally, Applicants have amended claim 25 so as to recite the missing conjunction.

In view of the foregoing amendments, Applicants respectfully request that the Examiner withdraw the objections to claims 24 and 25.

#### **Rejection of claims 24 and 25 under 35 U.S.C. § 112, second paragraph**

The Examiner rejects claims 24 and 25 under 35 U.S.C. § 112, second paragraph as allegedly "failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention.” In particular, the Examiner asserts that claims 24 and 25 fail to recite a final process step which agrees back with the preamble.

Applicants respectfully disagree that unamended claims 24 and 25 are indefinite. However, to expedite the allowance of the instant claims, Applicants have amended claim 24 so that the preamble and final phrase recited in step (c) of this claim are essentially the same. In particular, both the preamble and the final phrase of step (c) recite “determining the location of a decoding sequence on an array composition.”

In view of the foregoing amendment, Applicants respectfully request that the Examiner withdraw the rejection of claims 24 and 25 under 35 U.S.C. § 112, second paragraph.

Rejection of claims 24 and 25 under 35 U.S.C. § 102(a) and § 102(e)

The Examiner rejects claims 24 and 25 as allegedly anticipated under 35 U.S.C. § 102(a) by International Publication No. WO98/40726 (\*726 Application) or alternatively under 35 U.S.C. § 102(e) by either U.S. Patent No. 6,023,540 (\*540 Patent) or U.S. Patent No. 6,266,459 (\*459 Patent). In particular, the Examiner asserts that each of these references teach the following elements: (1) providing an array composition, wherein the array composition has a substrate with a surface having discrete sites and a microsphere population having a first and second subpopulation distributed on the discrete sites, and wherein each subpopulation includes an identifier nucleic acid sequence comprising a primer sequence and a decoding sequence adjacent to the primer sequence; (2) providing the array composition in a hybridization assay wherein the identifier nucleic acid binds to a labeled target nucleic acid; and (3) detecting the hybridized sequences.

Applicants respectfully disagree that unamended claims 24 and 25 are anticipated by any of the above-cited references. However, to expedite the allowance of the instant claims, Applicants have amended claim 24 to recite that the identifier nucleic acid sequences comprise the **same** primer sequence and a **different** decoding sequence adjacent to said primer sequence. None of the above-cited references disclose or suggest a subpopulation of microspheres comprising identifier nucleic acid sequences comprising the same primer sequence and a different decoding sequence adjacent to said primer sequence used with combinatorial decoding probes as claimed. As such, for at least this reason, none of above-cited references teach all of the elements of independent claim 24 or any of the claims depending therefrom.

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In view of the foregoing remarks and amendments, Applicants respectfully request that the Examiner withdraw the rejections of claims 24 and 25 under 35 U.S.C. § 102(a) and 35 U.S.C. § 102(e)

**Obviousness-type Double Patenting**

The Examiner rejects claims 24 and 25 under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-16 and 39-53 of the '540 Patent. Additionally, the Examiner asserts that claims 24 and 25 are unpatentable over claims 1-21 of the '459 Patent.

Applicants respectfully disagree that claims 24 and 25 are obvious over claims 1-16 and 39-53 of the '540 Patent or claims 1-21 of the '459 Patent. In addition, however, Applicants would like to point out that the instant patent application is assigned to Illumina, Inc. as evidenced by the assignment recorded at Reel No. 011504 and Frame No. 0046, whereas both the '540 Patent and the '459 Patent are assigned to the Trustees of Tufts College as evidenced by the assignment recorded at Reel No. 008619 and Frame No. 0496 as well as the assignment recorded at Reel No. 012414 and Frame No. 0529. Because the two issued patents cited by the Examiner are not owned by the owner of the instant patent application, Applicants submit that the obviousness-type double patenting rejections are not appropriate.

In view of the foregoing remarks, Applicants respectfully request that the Examiner withdraw the obviousness-type double patenting rejections of claims 24 and 25.

**CONCLUSION**

Applicants believe that all outstanding issues in this case have been resolved and that the present claims are in condition for allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is invited to contact the undersigned at the telephone number provided below in order to expedite the resolution of such issues.


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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: May 25, 2006

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